



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,210	10/02/2003	Felix Anthony Perriello	GLOB64012	9639

7590 01/17/2006

Tara L. Pfaeffle
Pietragallo, Bosick & Gordon
One Oxford Centre, 38th Floor
301 Grant Street
Pittsburgh, PA 15219

EXAMINER

BARRY, CHESTER T

ART UNIT	PAPER NUMBER
----------	--------------

1724

DATE MAILED: 01/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/677,210

Applicant(s)

PERRIELLO, FELIX ANTHONY

Examiner

Chester T. Barry

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3 - 8, 13, 15 - 17, 22, 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3 - 8, 13, 15 - 17, 22, 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/19/05.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Applicant's election with traverse of Species A, as shown in Fig. 1 of the application, in the reply filed on 12/9/05 is acknowledged, but no arguments were presented. Therefore, the election is treated as one made without traverse. The requirement is still deemed proper and is therefore made FINAL.

It is noted that while air and an alkane are different substances, the claimed-recited means for adding air and the means for adding an alkane in the elected species of Fig 1 appear to be identical in every respect. That is, the gas flowing through the means for adding air or means for adding an alkane does not limit these "means" elements.

Claims 1, 3 – 8, 22 are rejected under 35 USC Sec. 102(b) as anticipated by USP 5597491 to Winkler. Winkler describes an apparatus comprising two gas diffusers (39) as shown in Fig. 2. Insofar as the structure of applicant's conduit and diffusers intended for passage of an oxygen-containing gas on the one hand, and the structure of applicant's conduit and diffusers intended for passage of an alkane on the other hand do not appear to be different in any respect, and because the gas itself does not limit the scope of either "means for introducing," applicant's "means for introducing an oxygen-containing gas" reads on one of Winkler's air diffusers while applicant's "means for introducing an alkane" reads on another of Winkler's air diffusers.

Per claim 3, the examiner carefully considered the question of whether limiting the chemical identity of the oxygen-containing gas for which the "means for introducing an oxygen-containing gas" is intended to be used to air imparts any structural limitations

Art Unit: 1724

on those means above and beyond those already limiting of claim 1. Insofar as the material flowing through a material conduit does not limit the physical structure of the conduit itself, recitation of the specific chemical identity of the gas for which said means are intended does not render claim 3 narrower in scope than claim 1. The same reasoning applies to claims 4 and 22 as well.

Per claim 5, the uncontested fact that butane stimulates the growth of butane-utilizing bacteria does not narrow the scope of the structure recited in claim 1.

Per claim 6, the uncontested fact that at least some butane-utilizing bacteria are aerobic bacteria does not narrow the scope of the structure recited in claim 1.

Per claim 7, the uncontested fact that at least some butane-utilizing bacteria are anaerobic bacteria does not narrow the scope of the structure recited in claim 1.

Per claim 8, the uncontested fact that at least some municipal sewage systems for which the claimed apparatus is intended to be used comprise sludge does not narrow the scope of the structure recited in claim 1.

Claims 13, 15 – 17, 23 are rejected under 35 USC Sec. 102(b) as anticipated by USP 5037551 to Barkley. USP 5037551 to Barkley describes an oxygen gas source, a C1 – C4 source (col 9 line 2), a wastewater-containment vessel 10 into which the oxygen gas and C1 – C4 gas is introduced, an oxygen injector in flow communication with the wastewater-containment vessel 10, and a C1 – C4 injector in flow communication with the wastewater-containment vessel 10. One of skill would have at once envisaged introduction of methane, ethane, n-propane, isopropane, n-butane and

isobutane upon Barkley's disclosure of C1 – C4 alkanes. Insofar as the intended contents of the wastewater containment vessel – be it municipal or industrial wastewater – does not narrow or otherwise alter the structural elements of the containment vessel itself, the claim-recited element municipal sewage system wastewater containment vessel reads on Barkley's description of an industrial wastewater containment vessel.

Per claims 17 and 23, the contents of the of the wastewater system, e.g., sludge, does not limit the scope of the system itself.

Applicant's arguments filed in August 2005 were carefully considered and either addressed above or moot in view of the new grounds of rejection.

Claims 1, 3 – 8, 13, 15 – 17, 22, 23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of U.S. Patent No. 6669846, 10/308607, or 10/400963.

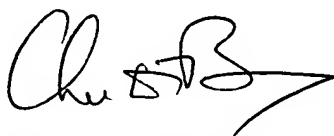
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

Art Unit: 1724

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

USP 5037551 to Barkley is cited also for describing a method of treating wastewater comprising introducing at least one alkane into the wastewater.



CHESTERT. BARRY
PRIMARY EXAMINER

571-272-1152